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Forest Service

Pacific Northwest Region

Olympic National Forest

Annual Report on Forest Plan Implementation and Monitoring for Fiscal Year 2005

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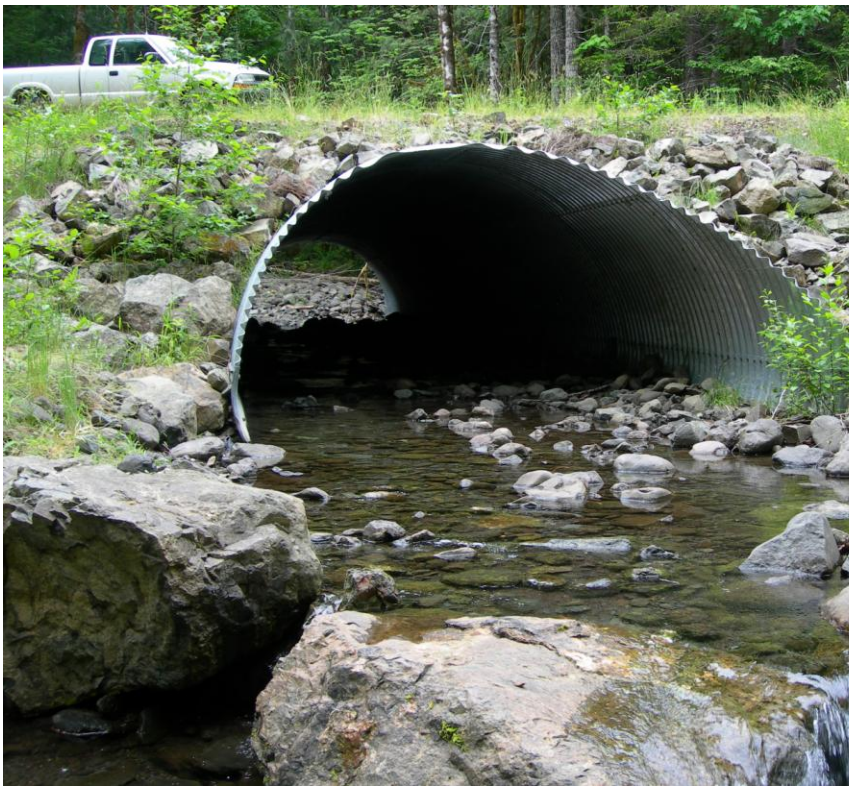

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Introduction

Program monitoring, evaluation, and accomplishment reporting is an ongoing process, designed to insure that Land and Resource Management Plan (LRMP) goals and objectives are being achieved, and standards and guidelines are being properly implemented. The Olympic National Forest annually monitors, evaluates, and reports accomplishments for a number of Forest programs. Some of these results are documented in this report.

Monitoring and accomplishment reporting are key components of Forest Plan implementation. They indicate how we are doing in implementing the Forest Plan, and provide a means of sharing successes in how we are working toward achievement of Forest Plan goals and objectives.

This report focuses on program achievements in fiscal year 2005 (October 2004 to September 2005) in the following program areas: aquatics, terrestrial species, ecology/genetics, fire/fuels, and planning.

The Forest Plan

The Land and Resource Management Plan (Forest Plan) for the Olympic National Forest was approved by the Regional Forester in July 1990. The Forest Plan establishes general management direction of all resource management activities on the Forest, providing for forest protection and coordinated multiple-use management. The Forest Plan was amended in April 1994 by what is referred to as the Northwest Forest Plan. This amendment established a combination of land allocations, with associated standards and guidelines, which are managed primarily to protect and enhance habitat for late-successional and old-growth forest related species.

The Forest

The Olympic National Forest is located on the Olympic Peninsula in the northwest portion of Washington State. The Peninsula is a separate and unique geographical area surrounded on three sides by saltwater. Lands administered by the Forest occupy approximately 632,300 acres in Clallam, Jefferson, Grays Harbor, and Mason Counties.

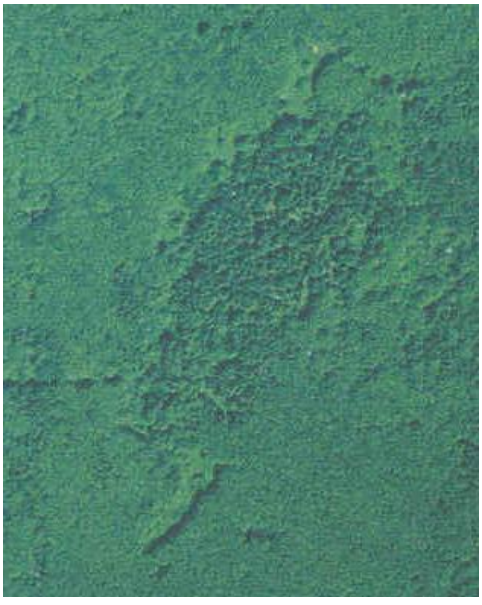
The Forest Plan, as amended, establishes land allocations for the Forest which identify goals, and standards and guidelines for specific areas on the Forest. A majority of the Forest, approximately 80%, is within some type of reserve allocation. About 66% is in Late Successional Reserves, which are designed to serve as habitat for late-successional and old-growth related species. Additionally about 14% is within Congressionally Reserved Areas (Wilderness Areas). The management emphasis for these reserved areas is to maintain a functional, interactive, late-successional and old-growth forest ecosystem.

Bonidu Flats Meadow Restoration

Bonidu Flats Meadow is located on the Pacific Ranger District. This series of meadows was created in 1973 by Forest Service personnel to enhance habitat for Roosevelt elk in the Sol Duc River watershed. Five areas, each slightly larger than one acre, were created in the alder dominated stand. The areas were plowed and seeded with grasses, and had been maintained periodically to prevent encroachment trees and brush until the early to mid 1990s. Without periodic maintenance the natural succession of vegetation has begun to eliminate the meadow habitat. This succession can be seen by comparing Figures 1 and 2.

Figure 1. Bonidu Flats Meadow in 1982

Figure 2. Bonidu Flats Meadow in 2004



Maintenance of this meadow habitat is important, particularly to Roosevelt elk which is an important big game species on the Olympic Peninsula. The elk population apparently peaked at the height of timber harvest as this led to increases in available forage. The decline in timber harvest on the Forest has resulted in a decline in forage which has impacted elk. Any habitat restoration work that can create or maintain quality forage areas for elk will benefit the population. Additionally meadow areas benefit a wide variety of other wildlife species, including songbirds, raptors, amphibians, and reptiles. The maintenance of these meadows will help achieve a diversity of habitats for several species of wildlife.

During the 2004 field season, representatives from the Olympic National Forest, Quileute Tribe, and Rocky Mountain Elk Foundation walked the Bonidu Flats Meadow and discussed management strategies to maintain the meadow habitat. It was recognized that there would be a lot of initial work to combat the existing encroachment, and that future maintenance would be needed. It was decided that a collaborative approach would be the best approach. The Forest Service proposal to Rocky Mountain Elk Foundation for funding was approved, and the Tribe supplied data and crews. Work activity included cutting small alder and salmonberry, limbing large alder and conifers around the meadow edges, piling and burning slash, girdling larger alder, and pulling invasive weeds.

Work began in early May, with initial work accomplished by a Washington State Department of Natural Resources inmate crew, and follow up work completed by a Quileute tribal crew. One change in project implementation was instead of burning slash piles; slash was mounded into smaller, higher, more compact piles to be left as brush habitat for wildlife species such as rabbits and songbirds.

Forest Service personnel established photo points and gathered data on elk habitat. Photo points were established prior to project implementation, with photos taken at the end of August 2005 to document the completed work. These photo points will be taken again in coming years to monitor the efficacy of the mechanical encroachment work as well as the rate of regrowth by vegetation. Figures 3 and 4 show before and after pictures of one of the meadows.

Figure 3. Meadow 5, April 26, 2005.

Figure 4. Meadow 5, August 30, 2005, after encroachment work and slash piling.

Stream Improvement

Fish habitat restoration projects completed in 2005 include replacement or removal of culvert fish passage barriers, instream large wood placement, riparian vegetation treatments to increase the number and growth of conifers, improving access into off-channel ponds, and distributing surplus hatchery salmon carcasses to restore stream nutrients. The majority of these projects were accomplished through partnerships, including challenge cost share with Washington State Department of Ecology, volunteer efforts, and grants such as Title II.

The following activities were accomplished in 2005.

- Five fish barrier culverts were replaced with bridges, open-bottom arches, or removed. Almost six miles of fish habitat that had been previously inaccessible were reopened. Adult Chinook and coho salmon were observed moving through two of the new crossings before the projects were even completed.
- Large wood complexes were placed in a one mile reach of the North Fork Calawah River to complete the final phase of a three year project with the Pacific Coast Salmon Coalition. Monitoring of the first two phases of the project has shown dramatic improvements in spawning habitat for Chinook and coho salmon within the treated reaches.
- Ongoing maintenance of existing riparian treatment areas was completed along approximately one mile of the North Fork Calawah River.
- Growth and survival of existing streamside conifers along approximately one mile of the Bogachiel River was improved by removing competing alders and heavy brush.
- Surplus hatchery salmon carcasses were placed along approximately 15 miles of the upper South Fork Skokomish River to improve growth and survival for juvenile salmonids and bull trout.

TES Fish Program

Two primary objectives of the Forest's fish TES (Threatened, Endangered, Sensitive) species program in 2005 were to continue the cooperative Dungeness River bull trout telemetry project and monitoring of the bull trout population in the South Fork Skokomish River.

The Dungeness Bull Trout Project is a large and active partnership with US Fish and Wildlife Service, Washington State Department of Fish and Wildlife, Olympic National Park, Clallam County Streamkeepers, and other volunteers. Started in 2004 this project is tracking movement of 50 bull trout implanted with radio-telemetry tags throughout the 25 miles of anadromous stream within the watershed. Snorkel and spawning surveys were used to validate telemetry results. Tracking tagged fish has helped identify key spawning and overwintering areas, and will also help identify restoration projects and management actions to help recover bull trout. Telemetry work is scheduled to be completed in 2006.

Ongoing bull trout snorkel and spawning surveys were continued in 2005 in selected stream reaches within the South Fork Skokomish River to monitor populations within the watershed. These monitoring efforts have been ongoing since 1995.

Whitebark Pine Surveys

Whitebark pine (*Pinus albicaulis*) is a high-elevation tree species that occurs only in mountainous regions in western North America. This species is at risk throughout its range from a non-native disease, white pine blister rust. In 2004, whitebark pine was listed as a Species of Concern by the Western Washington Fish and Wildlife Office of the U.S. Fish and Wildlife Service.

A small population of whitebark pine inhabits the rugged subalpine elevations of the northeastern Olympic Mountains. Part of this population occurs on the Olympic National Forest, and part is in the Olympic National Park. In 2004 and 2005, under a two-year agreement, forest and park personnel conducted surveys to locate, map, and assess the health of whitebark pine in the Olympic Mountains. Twenty percent of all live whitebark pine trees observed in these surveys were infected with blister rust. On a stand-by-stand basis, the rate of white pine blister rust infection in live whitebark pine trees ranged from 5 percent to 69 percent. The data and maps produced over the two years of this agreement will help guide Forest and Park land managers in making decisions that affect whitebark pine and its habitat on the Olympic Peninsula.

Fire Management Accomplishments

The fire management program on the Forest produces two types of accomplishment.

1. Firefighting production capability is the sum of the average production rate for all fire fighting resources on the Forest, expressed in chains-per-hour. A chain is a distance measurement equal to 66 feet. The Forest's production capability in 2005 was 15.0 chains-per-hour.
2. The second accomplishment reported is acres of timber harvest related woody fuels treated. This involves the treatment of fuels generated from timber sales by techniques including lopping and scattering, hand or mechanical piling, and burning. In 2005 the Forest treated 70.0 acres.

NWFP Implementation Monitoring

Year 2005 marked the tenth year of the regional-scale Northwest Forest Plan implementation monitoring program, of which the Olympic Province is a part. The purpose of the program is to determine and document whether the Record of Decision for the Plan and its corresponding Standards and Guidelines are being consistently followed across the range of the Plan. The reviews were conducted by a team composed of Olympic Province Advisory Committee members assisted by Olympic National Forest employees.

Projects to be monitored were randomly selected from a list of Forest wide projects which had been planned and implemented under the Plan management guidance. Since the emphasis in the earlier years of monitoring was on timber sales, this year's projects were selected from projects other than timber sales. These other projects consisted of activities/programs such as prescribed fire, recreation, watershed

restoration, and road decommissioning. The monitoring process used standardized questionnaires.

Two projects were selected for monitoring, the Lena Lake Trail Reconstruction and Boundary Timber Sale Prescribed Fire projects. As part of the monitoring protocol the 5th field watersheds containing the selected projects were also scheduled to be monitored. In 2005 this included the Hamma Hamma and South Fork Skokomish watersheds.

In general the questionnaire results indicated that at both the watershed and project levels the activities reviewed met the appropriate Forest Plan standards and guidelines, and objectives. The only instance where standards and guidelines were not met was on the Boundary Timber Sale Prescribed Fire project, concerning the amount of coarse woody debris remaining within the treatment unit. The amount left was insufficient to meet Forest Plan standards and guidelines for this criterion. However there was review team discussion as to whether it was possible to meet the project's objective of creating a savannah condition and also meet the coarse woody debris standards. The team concluded that it would be appropriate in future projects of this type to propose a site-specific Forest Plan amendment to waive the coarse woody debris requirements.

Overall the review teams indicated the reviews were a valuable experience and provided a good opportunity for information sharing.

Road Treatment Effectiveness Monitoring

In 2005, the Forest finalized a four year contract under which data was collected to determine the effectiveness of road restoration treatments designed to reduce sediment delivery to aquatic systems. Monitoring covered thirteen individual culvert sites and nine road segments. The monitoring design involved multiple-year implementation and included data collection for three phases. Phase 1 - prior to treatment; Phase 2 - immediately after treatment; and Phase 3 - one-year following treatment. Road restoration included reestablishment of hill slope hydrology through culvert removal, culvert replacement, construction of cross drain structures, or re-contouring the road prism. Other treatments included slope stabilization through side cast pullback and removal of large road fills. A variety of erosion control methods were used to stabilize disturbed soil areas including seeding, mulching, terracing, planting of native vegetation and placement of large wood.

Monitoring results are summarized in a separate report for the thirteen culvert sites and nine road segments. Results vary for these different road features but conditions in the short term (one-year following treatment) indicate that treatments met the overall restoration objectives. At a few specific locations implementation of the treatments resulted in unfavorable site conditions such as down-cutting at the outlet of a culvert, narrow bottom channel widths at ditch relief culvert sites, or erosion at the outlet of cross drains. However the majority of treatments are functioning as designed.

Figure 5 Road Restoration Monitoring.

Culvert Removal Site (After Treatment)

Site of Cross Drain Structure (Prior to Treatment)

Accomplishment of Outputs and Services

Accomplishment Item	Units	Accomplishment
Facilities meeting accessibility standards	number	20
Facilities maintained to standard	number	1
Facility condition surveys performed as scheduled	number	1
Special forest product permits administered	number	964
Timber volume harvested	ccf	26,800
	MMBF	13,400
Timber volume sold	ccf	34,900
	MMBF	17,400
Land use proposals and applications processed	number	25
Authorizations administered to standard	number	35
Total authorizations administered	number	200
Invasive plant treatment	acres	24
Soil and water resource improvements	acres	2
Terrestrial wildlife habitat restored or enhanced	acres	114
Streams restored or enhanced	miles	11
Fish barrier culverts replaced	number	5